

Work Order ID 69795

Thursday, May 19, 2011 1:02:06 PM



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Item ID:	D6004-115	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Crosstube Material					
Start Date:	5/19/2011	Start Qty:	30.00		Cust Item ID:	
Required Date:	4/12/2012	Req'd Qty:	30.00		Customer:	
Reference:						

Approvals:	Process Plan:	<u>CL</u>	Date:	<u>11/05/19</u>	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6004	Rev A								

100		0.00							
	PURCHASING								
Purchasing	Memo	0.00							

Purchasing
Issue P/O 14138 ☐ (a) Extrude as per Dwg D6004 ☐ (b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 ☐ or QQ-A-200/11) seamless aluminum tube ☐ (c) Minimum ultimate tensile strength = 77 ksi ☐ (d) Minimum tensile yield strenght=66 ksi ☐ (e) Material certification

CL 11/05/19 30

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

CL 12/23/18 37

120	QC6- Inspect dimensions to drawing	0.00							
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg D6004								

CL 12.05.03 / 5 12/15/13
see attached Dwg sheets

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 69795

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Item ID: D6004-115

Accept

Revision ID:

Item Name: Crosstube Material

Start Date: 5/19/2011 Start Qty: 30.00

Required Date: 4/12/2012 Req'd Qty: 30.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Chemical Conversion Coat per QSI005 4.1

0.00

N/A 12-5-7

HandFinish

Memo

0.00

Hand Finishing

140

Identify as per dwg & Stock Location: 46

0.00

RM 12-5-7

Packaging

Memo

0.00

Packaging

150

QC21- Final Inspection - Work Order Release

0.00

12/5/7

QC

Memo

0.00

Quality Control

MC
12-05-07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 69795



Parent Item: D6004-115



Parent Item Name: Crosstube Material


Start Date: 5/19/2011

Required Date: 4/12/2012

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP Rev:B 00.12.15 Added: Issue P/O EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6004-115P  Crosstube material		Purchased	No			110	Each	0.0000	1	30			



Rep/11 (38)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

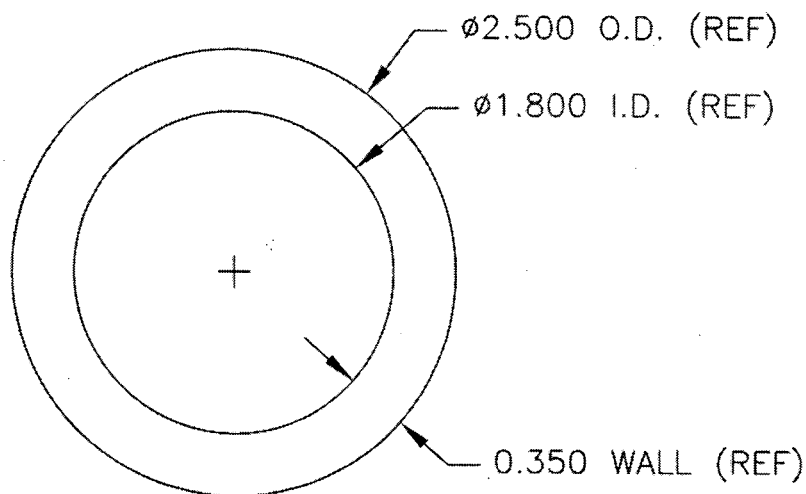
NOTE: Date & initial all entries



DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D6004	REV. A SHEET 1 OF 1
DATE 00.11.22		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.22	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 #



NOTES

- 1) D6004-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6004-115

CL11/05119
WID: 69795

- 2) MATERIAL: 2.500 OD x 0.350 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.035 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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Al. Unna ref. no.	42438/2
Customer PO.	Po. 14138
Date:	03.30.12

Dart Aerospace PO. 14138
D6004 - 115
Made in Germany Dest.: Hawkesbury Ont, Canada

free from live plant pests

[illegible]

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

D6004

RMS: outside 25 μ " max. 11,9 μ "

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

EXTRUSION INSPECTION SHEET

ULTRA SONIC MEASUREMENTS

TUBE #	TOTAL LENGTH	DIA two readings	INSIDE DIA	wall thickness measured w/vern	Strightness at 12"	Rockwell Reading	LOCATION on tube	R1	R2	R3	R4
DWG	115.00"	2.500"	1.800"	0.350"	0.010"	N/A	middle of tube				
1	115.00"	2.499"/2.500"	1.786"	0.368"/0.348"	0.013"	N/A	57.500"	0.345"	0.373"	0.365"	0.346"
2	115.00"	2.493"/2.495"	1.789"	0.368"/0.345"	0.017"	N/A	57.500"	0.362"	0.344"	0.359"	0.376"
3	115.00"	2.503"/2.501"	1.783"	0.369"/0.351"	0.015"	N/A	57.500"	0.363"	0.353"	0.365"	0.369"
4	115.00"	2.504"/2.504"	1.785"	0.370"/0.340"	0.019"	N/A	57.500"	0.354"	0.362"	0.365"	0.362"
5	115.00"	2.503"/2.502"	1.786"	0.370"/0.340"	0.022"	N/A	57.500"	0.362"	0.349"	0.360"	0.369"
6	115.00"	2.500"/2.504"	1.781"	0.364"/0.346"	0.013"	N/A	57.500"	0.351"	0.372"	0.372"	0.353"
7	115.00"	2.503"/2.507"	1.788"	0.373"/0.343"	0.024"	N/A	57.500"	0.365"	0.346"	0.358"	0.371"
8	115.00"	2.504"/2.502"	1.786"	0.368"/0.343"	0.017"	N/A	57.500"	0.350"	0.351"	0.362"	0.365"
9	115.00"	2.504"/2.507"	1.789"	0.375"/0.342"	0.019"	N/A	57.500"	0.351"	0.373"	0.365"	0.349"
10	115.00"	2.500"/2.503"	1.785"	0.366"/0.347"	0.020"	N/A	57.500"	0.356"	0.368"	0.367"	0.369"
11	115.00"	2.495"/2.499"	1.786"	0.369"/0.351"	0.018"	N/A	57.500"	0.351"	0.364"	0.365"	0.372"
12	115.00"	2.506"/2.500"	1.791"	0.334"/0.378"	0.017"	N/A	57.500"	0.345"	0.378"	0.385"	0.358"
13	115.00"	2.502"/2.501"	1.788"	0.367"/0.349"	0.035"	N/A	57.500"	0.356"	0.363"	0.373"	0.371"
14	115.00"	2.494"/2.495"	1.787"	0.364"/0.349"	0.020"	N/A	57.500"	0.362"	0.369"	0.367"	0.354"
15	115.00"	2.502"/2.501"	1.788"	0.362"/0.348"	0.016"	N/A	57.500"	0.353"	0.363"	0.369"	0.362"
PART # D6004-115		P/O# 14138		BATCH # B69795		Notes: tube#12 has wall issue see sepreat wall measurment sheet					

Acceptable P12.0503

REFERENCE ONLY
8/26/29

Tube #12	<u>ULTRA SONIC MEASURMENTS</u>				
Side	LOCATION on tube	R1	R2	R3	R4
A	12"	0.338"	0.380"		
	24"	0.346"	0.383"		
	36"	0.341"	0.388"		
	48"	0.341"	0.378"		
	60"	N/C	N/C		
		Part number	D6004-115		
		Batch number	B69795 PO14138		
		Measured By	ED 12-04-29		

REFERENCE ONLY

8/21/29

